

Forces and Interactions

Design an Experiment

PS2-3 and PS2-5

Part 1: Practice with Design

Use the engineering design cycle to create an experiment with the magnet board.

Follow the instructions each step of the way.



Step 1: Asking questions**

- Look at the box on your table. Try different things with it and write down anything that you wonder as you experiment.

We wonder...

The phenomenon we are studying is**...

Step 2: Imagine the Possibilities

- With your group, talk about and think of different ways that you could manipulate (change) the magnet board to get different results. Record your imaginings below.



We could...

Or...



Step 3: To the Drawing Board

- Choose one of your ideas that you'd like to design an experiment around.
- Write out the steps to your experiment in the space below.

Wheel of Inquiry

With the class, copy down all the potential independent and dependent variables that you could do for this assignment:

Independent Variables <i>(What you are changing)</i>	Dependent Variables <i>(The data you are collecting)</i>

After listening to all potential options, grab an inquiry wheel and an Expo marker, and then list a few variables on your wheel of inquiry before making your final decision.

*Our independent variable**:*

*Our dependent variable**:*

*Our question is**...*

Hypothesis**

If we _____, then _____,
because _____

Our steps to complete the experiment...

*The data we will collect will include**...*

*We are creating our experiment this way because**...*

Step 4: Create!

- Follow your instructions to carry out your experiment.
- Take a picture of the completed experiment and record any data in the table below.



Our Picture

*Our Data***

